

CRACKLIN' STATIC



SIERRA NEVADA Amateur Radio Society

Serving the Amateur Radio Community since April 16, 1968

<http://www.snars.org>

RENO, NEVADA

MAY 2016

-----PRESIDENT'S VOICE-----

Anthony Marcin, W7XM

I write this president's voice this month from the hotel at the State Convention in Las Vegas. The team in Las Vegas has done a great job so far and I am excited to see the turnout for this event is doing great. Vendors this year include HRO, Yaesu, Icom, Powerwerx, Ventenna, Elk Antenna, Tower Antenna, and many others. Would just like to thank everyone who has helped to make NVCON a great success.

I would like to congratulate the two new board members joining us, Rob Dunbar, NB6C and Barry Bettman, K6ST at the April special meeting. The board also chose to elect Jim Shepherd W6US to be Vice-President and Rob Dunbar to be Secretary.

At the last board meeting in April, we approved the creation of a new committee/team, HF Team. Over the last few months I have heard from members of the club to start including more HF related topics and activities. As we continue to grow and to engage the amateur radio community this would naturally be our next area to focus a bit of time on.

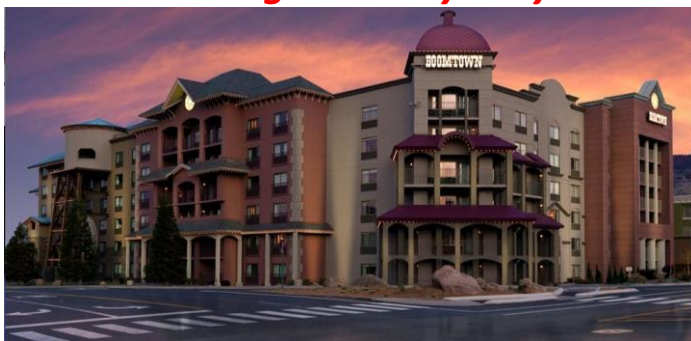
The HF Team will have three initial objectives as it is being formed. The first is the creation of educational classes /workshops. Some will be presented at the Monthly Breakfast meetings while some in a classroom setting. Second the HF Team will be tasked with providing support/Elmering to new and current users of HF Radio. Third to provide opportunities to allow technicians and new HF users to attend events and to operate HF. As we travel to events and festivals and are able to set up an HF station would allow users to come operate in the field. The club recently purchased a Yaesu FT-450 Radio that will be taken to events and activities to allow those interested in HF to have opportunities to operate HF. This will also be used as PR at our club booth/tent to allow the general public to listen and see to drive some interest as well into Amateur Radio.

At the end of May we will begin the General Class for those who are looking to upgrade their licenses from Technician. This class will be held for 5 weeks and meet twice each week. This will further to help support and encourage technicians to upgrade and to explore HF radio.

If you have any other ideas and or thoughts on where SNARS should be doing and or looking to focus on more please let me know. I really do feel we have one of the best amateur radio organization in Nevada. I look forward to hearing from everyone and seeing those interested in HF Radio activities to show up to our events and classes in the near future.

Tony, W7XM

SNARS meeting Saturday May 7



7:30 AM Boomtown Casino Hotel, I-80 exit 4, Verdi NV, in the Banquet/Conference Center.

Along with the Reno Ham Swap, Tom Taormina K5RC presents *Voice over Large Antennas*



SNARS, P.O. Box 7727, Reno, NV 89510

Membership: \$40 Individual, \$50 Family

OFFICERS 2015

President.....Tony Marcin.....W7XM
Vice President..... Jim Shepherd.....W6US
Treasurer.....Bill Jones.....AE7OX
Secretary.....Rob Dunbar.....NB6C
Director.....Steve Johnson.....KS6A
Director.....John Byerly.....N7ROJ
Director.....Barry Bettman.....K6ST

STAFF 2016

By Laws Review Committee.....vacant
Club Public Information Officer.....vacant
Control Operators Manager.....W7DED
Cracklin' Static Editor.....WB2AWQ
Meeting Greeters.....AE7OX
History Archivist.....KF7KTC
Station Licensee for KR7ENO.....WB2AWQ
Control Operators FOR KR7ENO.....WB2AWQ
Station Licensee for W7TA.....KE7VSR
Tech Committee Chair.....N7ROJ
Chief VE Examiner.....NN7K
Membership Chairman.....N2MOO
Program Chairman.....vacant
Web MasterW7XM
Facebook Page Administrator.....W7XM
Events (ARES) Coordinator.....WA6MTY
Education Team Chair.....W7XM
Reno Ham Swap.....NB6C
Field Day Co-chair.....KS6A
Field Day Co-chair.....W6US
Audit.....vacant
Noon Net.....KS6A

CRACKLIN' STATIC PUBLICATION

E-mail..... **holden7471@msn.com**

Cracklin' Static is the Newsletter of, and sponsored by the Sierra Nevada Amateur Radio Society. Opinions expressed herein are those of the editors and contributors and should not be considered as official expressions of the Club Officers, Staff or Club Members, or as endorsements by same.

Material for publication may be edited to enhance readability or to save space. We reserve the right to use whatever font size or line spacing may be required in order to publish this Newsletter.

Deadline for input to the newsletter is 1500 hours on the Sunday prior to the 1st Saturday of each month.

Cracklin' Static is e-published in Adobe PDF Format. It may be enjoyed at the SNARS web site.

Amateur Radio License Testing 2016

SNARS, Third Saturday of February, April, June, August, October and December. Testing will be at the REOC located at 5195 Spectrum Blvd., be there at 9 AM sharp! Bill Nichols... NN7K
SIERA CLUB: Silver State Charter High School, 788 Fairview Dr, Carson City..... 3rd Saturday of January, March, May, July, September, and November

.....Dale Anderson, kv7s@charter.net

Elko Area: Third Saturday of January, April, July, October.

11:00AM, Northeast Nevada Regional Hospital, 2001 Errecart Boulevard, Elko, NV w7gk_1@yahoo.com

SNARS Repeater System Frequencies

I-80-Mt Rose Linked System (W7TA)

Reno, Sparks, Carson City (Ophir Peak) 443.075 + 123.0 Normal Operation
Lovelock, Black Rock Desert (Toulon Peak) 146.925 - 123.0 Normal Operation
Winnemucca 146.670 - 123.0 Normal Operation
Reno, Sparks (Virginia Peak) 147.030 + 123.0 Normal Operation
Carson City, Tahoe, Truckee (Mt Rose Knob) 147.150 + 123.0 Normal Op
Reno, Sparks, North Valleys (Peavine Peak) 147.210 + 100.0 Normal Operation
Yerington, Wellington (Lobdelle Peak) 444.875 + 100.0 Normal Operation

IRLP/EchoLink System (W7TA)

Reno, Sparks (GSR) 147.300 + 123.0 Connected to/Status:

Standalone Systems, Ragchew Repeaters (W7TA)

Reno, Sparks 52.580 - 114.8 Normal Operation
Reno, Sparks, Carson City, Dayton (Ophir Peak) 147.390 + 100.0 Normal Op
Reno, Sparks 927.1125 - 114.8 Normal Operation
Reno, Sparks, Carson City (Ophir Peak) 146.610 - 123.0 Not Linked, off air

Digital/APRS Systems (W7TA)

Reno, Sparks, Carson City (Ophir Peak) 145.050 - RNO Normal Operation
Carson City, Tahoe, Truckee (Mt Rose Knob) 145.050 - ROSE Normal Op
Lovelock, Black Rock Desert (Lobdelle peak) 144.390 - TOULON Normal Op

Portable Repeaters (KR7ENO)

Portable System 147.000 - 123.0 Special events only

DMR Digital Mobile Radio

Reno-Sparks 444.925 + CC1 DMR System
Reno, Carson, Dayton 444.825 + CC1
Lake Tahoe, Truckee 443.925 + CC1

C4FM Digital Repeater – YAESU OFF THE AIR

D-Star (N7NDS) NARRI

Reno-Sparks-Carson (Mt Davidson) 444.625 + (Module B)
Reno-Sparks-Carson (Mt Davidson) 145.175 - (Module C)

THE NAME OF THE GAME

By Jim Shepherd W6US nvjims@gmail.com

Field Day! --Part 1

The last weekend in June, we will all be gathering at Washoe State Park to operate around the clock for the 24 hours of Field Day.

We are planning on operating in 7A class again. This means that we will have 2 CW stations, 2 Digital stations and 3 Voice stations. The Holdens will be setting up the 2 CW stations, but will welcome relief operators who want to pound the brass.

Currently we have two digital stations as Tom Porada KK7YW will be setting up one and John Byerly, N7ROJ will be on the other. Digital contacts count the same as CW contacts and have been overlooked in the past. These stations need to have the proper interface to the radios and the software to drive those radios. RTTY and PSK31 are the two most popular modes, but they will be free to use AMTOR, PACTOR, PACKET, JT65 and a host of other digital signals. Some of the modes will allow communications below the noise level. This will be an excellent opportunity for anyone interested in getting hands on operating experience and learn more about these digital modes.

There will also be 3 voice operating positions. Right now it looks like Rob Dunbar NB6C, Peter DeBay KE7VSR and myself, W6US, will be providing the stations for these operations. We are always happy to see someone else operate and make contacts. This is an around the clock operation, and relief operators, especially for the post midnight shift are really needed. At about 3 am our time, the morning shift will be starting up on the east coast and they will be coming in solid on 80 and 40 meter bands.

All of the stations will be able to operate on all of the allowable bands and have antennas for the 5 most common ones. We will coordinate the frequency usage between the stations so that there is only one station per band and mode on the air at the same time. Unless we hit some very rare conditions, not all of the bands will be open simultaneously. Usually there are only 2-3 bands open at the same time. With 3 bands open we can run all 7 stations at once.

There may be a couple of other stations that can be set up. A VHF station for 6m, 2m and up can be set up without adding to our station count. This would be for

weak signal operations using SSB, CW or digital modes. Our site is not the best location for this as it is in a deep valley, and with the sunspots near the bottom of the cycle we may not get any contacts like last year. Another station may be set up for a satellite contact which can add 100 points to our total.

Unfortunately, our Get-On-The-Air (GOTA) station made 0 contacts last year. If someone is interested in running this and is willing to personally contact all of the new hams and get them out there, we will add this station. This is a chance for newly licensed operators to get some HF experience. The VE's have added lots of new hams in this area this last year, but the biggest challenge is to get them to come out and participate. If we don't have a GOTA station, we will still use any new hams on the main stations. We can even put unlicensed members of the public on the air with a control operator present.

Each station will have a computer for logging the contacts and they will be networked to help prevent dupes. Other necessary station accessories will be provided, and we are going to start building a cache of bandpass filters to aid with interference from other stations at the site. A 'cheat sheet' of operating instructions for each station will be furnished as well as a 'cheat sheet' on running the logging program. The digital stations will need to have a computer that is hooked to the generator power since it is controlling the radio, but the logging computers can be on 'shore power'.

We are located at the equestrian area this year. It is near the "B" loop campground, so we will be limited to placing our generators on the northeast corner of our site. There is plenty of room within the 'island' where we will be located for multiple antenna placements without having to cross roads with any cables. We are going to try to have most of the operating positions near the main covered area.

One very nice feature of the site is a bigger kitchen area than we had at the group site last year. We will be making use of it for the meals needed at the site. While the operating period is from 1100 on Saturday to 1100 on Sunday, setup will be starting Thursday evening and it will be mid-afternoon Sunday before we get everything packed up. If there is enough interest in having an upscale dinner on Friday night, and with the individual payment of expenses, we could have a steak or lobster or crab feed. Saturday night, at about 1930, we will have a

burger & hotdog feed provided by the club for all. Hot breakfasts are being planned for Saturday and Sunday mornings for those who are staying on site.

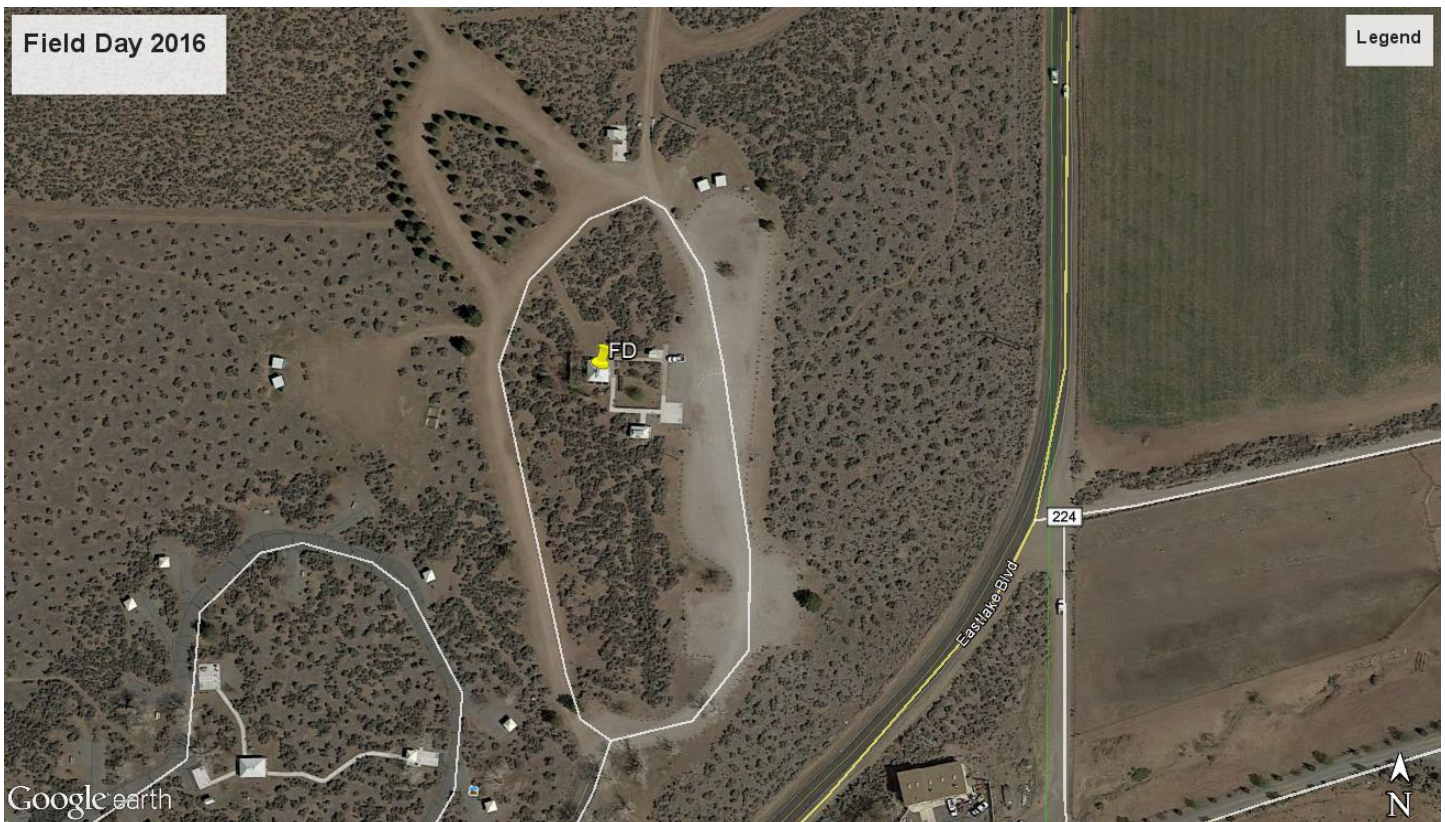
The Set-Up and Demob periods are exceedingly important! The idea is to have everything set up, tested, and ready to go well before the 1100 start on Saturday morning. The major antenna setup work will be done on Friday and **everyone** will need to bring a hard hat. Although we will not be shooting things over tall trees at this site, there will be tall structures set up. Gloves and eye protection as well as sunscreen and bug repellent are also needed. We don't have as much shade as we did last year so we will have to make our own. We also need a big crew to take down everything Sunday after 1100, and the same safety gear will be needed. A lot of gear needs to be packed into vehicles in a specific order so that it will fit, and that takes some time. We didn't get out of there until about 1500 last year, and there will be more antenna supports to take down this year as we do not have the trees. Also, there were materials left at the site that took

months to get back to their owners last year, so please label all of your items and check before you leave.

Not interested in operating? We will have a need for folks to cook, provide IT services, refuel generators, do public relations, run to town for forgotten items or resupply, keep the coffee pot going, and other critical support as needed. These are the real heroes of Field Day!

For further information contact either myself at nvjims@gmail.com, or Steve Johnson, KS6A, at ks6a@sbcglobal.net

Editor's note: Hard hats are inexpensively obtained from FullSource: http://www.fullsource.com/pyramex-hp14030/?gclid=Cj0KEQjwo_y4BRD0nMnfogqnxtEBEiQAWdA129UVS_8Z2ecnrnX2QDMC65NOKDgR8umGYLX9R1mZhbgAAsk88P8HAQ



THE SNARS NOON NET

The Noon Net, formerly the New Hams Q&A Net on 147.030 + and 147.150+, PL 123.0, and 147.210 + and 444.875+, PL 100.0 . The net is held weekly at 1200, every Sunday afternoon. The purpose of this net is a Q&A and information net for newly licensed hams and all hams wishing to ask question about different aspects of Ham Radio. It will give new hams in particular a venue for getting on the air in a controlled net moderated by a ham with more experience. The net will be open to any interested ham. Questions will be answered and discussed by the more experienced hams listening on the Net.

MIKE'S MISSIVES CHAPTER SIXTEEN

PART 97

STATION IDENTIFICATION

There is a simple reason why stations must transmit their call sign – so people will know who they are talking to. In addition, unidentified transmissions are prohibited. The rules are straightforward in this area. Part 97.119(a) states: “Each amateur radio station, except a space station or telecommand station must transmit its assigned call sign its transmitting channel at the end of each communication, and at least every 10 minutes during a communication, for the purpose of clearly making the source of the transmissions from the station known to those receiving the transmissions. No station may transmit unidentified communications or signals, or transmit as the station call sign, and call sign not authorized to the station.”

You will hear a wide range of comments and opinions and variations on this simple rule. But under FCC Rules you are required to give your call sign every 10 minutes during active communications and at the end of the contact you are finishing.

You are *not required* to give your call sign at the start of a contact.

When conducting an international third party contact, you must give both the call sign of the station with which you are communicating with and your own call sign.

If you have upgraded your license recently, you must sign the temporary designator, such as “temporary AG” or Temporary “AE” until your upgrade is processed by the FCC and appears in the ULS database.



From Tom: A fun look at Ham Radio and how it continually motivates some of us to “add 3db” to our signals and how we can push the boundaries of antenna technology. Saturday, May 7 at the SNARS breakfast!

(Editor’s note: I was going to counter Tom’s photo with my own “MoMA” or Morse over Miniscule Antennas, but my magnet wire antennas wouldn’t show on the photo.....)

Weekly nets on the SNARS repeater systems

Western Nevada Noon net (daily, 12:00 PM)

147.150 + 123.0, 147.210 + 100.0, 147.030 + 123.0, 444.875 + 100.0

The Morning Net (Monday – Friday at 10:00 AM)

147.300 + 123.0

Bishops Storehouse Net (Monday nights at 9:15 PM)

147.150 + 123.0, 147.210 + 100.0, 147.030 + 123.0, 444.875 + 100.0

North Western Nevada ARES Net (Tuesday nights at 7:00 PM)

147.150 + 123.0, 147.210 + 100.0, 147.030 + 123.0, 444.875 + 100.0

State SATERN Net (Tuesday nights at 8:00 PM)

147.300 + 123.0

State SKYWARN Net (Wednesday nights at 7:00 PM)

147.150 + 123.0, 147.210 + 100.0, 147.030 + 123.0, 444.875 + 100.0

Northern Nevada Preppers Group Net (Wednesday nights at 8:00 PM)

147.150 + 123.0, 147.210 + 100.0, 147.030 + 123.0, 444.875 + 100.0

State ARES Net (Thursday nights at 7:00 PM)

147.300 + 123.0

SNARS New Ham Net (Sunday afternoons at 12:00 PM)

147.030 + and 147.150, +, PL 123.0, and 147.210 + and 444.875+, PL 100.0

* * * * *

RENO HAM SWAP

Spring Ham Swap & Hamfest

**Boomtown Casino Hotel, Reno,
Nevada**

Saturday, May 7, 2016

The Ham Swap will be located in the west parking lot of Boomtown.

2100 Garson Rd. Verdi, NV 89439 - Exit #4 I-80 East

EVENT DETAILS

6:00 AM - Swap Setup

\$10.00 Per Parking Lot Space

Approx 8'x16'

6:30 AM - Open to Public

7:00 AM - N7V Special Event Station

Special Events Station for the 7th Call Area QSO Party. All are welcome to operate and participate in 7QP!

7:30AM Breakfast

Buffet Breakfast - \$12.00 - Conference Center

9:00AM Radio Exams

Ham radio exams will be available. \$15.00 fee

10:00 AM - Raffle Drawing

Purchase raffle tickets at the event.

- FT60R, ARRL Gift Certificates, RF Adapter Certificate and more.

Questions or Comments

info@renohamswap.com

About Reno Ham Swap

The Reno Ham Swap is held yearly in May and September. The Reno Ham Swap is becoming a premier event for ham swappers in the Northern Nevada and Sierra Nevada Areas. The event draws over 25 unique ham swappers and over 200 attendees and growing. The event is hosted by the Sierra Nevada Amateur Radio Society, Inc.

NAME THAT RIG



(Answer on page 8)

7TH AREA QSO PARTY

7th Call Area QSO Party -- May 7-8, 2016
(our chance to be the "DX")

1300 UTC Saturday to 0700 UTC Sunday (6 AM to midnight PDT the first Saturday in May). 7th call area stations work everyone, others work 7th area stations only. Work stations once per band/mode. 7th area mobiles (and those participating in other concurrent QSO parties or contests) may be worked again as they enter new counties.

Full 7QP details and rules:

<http://www.ws7n.net/7QP/new/Page.asp?content=rules>

(and more 7QP info!

Greetings Gentleman (and Ladies),
Lets go Camping!

When: May6-7-8,2016

Where: Eastern Nevada, Lincoln County in particular. Exact location: Sand Spring Dry Lake (37° 41.943'N 115° 46.809'W) (DM27cq) just North East of Rachel Nevada, off hwy 375. Plenty of room to set up any antenna, flat for easy leveling of campers or motor homes, no rocks to move for tent campers. A backup location has been chosen just a mile or so farther the the North East from the dry lake. In the event there's rain in the forecast or its rained in the recent past.

Why: Its finally warm and its fun! Its the 7th area QSO party.

Who: Anyone that wants to go, hams and non hams alike, outdoorsmen and off-roaders, all are invited.

So here's the deal; Saturday from 6 AM to Midnight is the 7th area QSO party. My friend Tom (K5RC) is Nevada's captain he's looking for a group to work Lincoln county. So lets circle the wagons, setup a couple of radio stations, spark up the camp fire, fire up the BBQ and have some fun. For anyone not interested in getting on the air, there's plenty of area to explore in Eastern Nevada, Cathedral Gorge for one, or just hang out and enjoy the day. Part of camping is good food, so lets plan a big feast. For anyone that holds a Technician class license and has never done any HF, this is a great time to check it out. See if its worth upgrading your license. From the equipment to the techniques its totally different from the 2 meter

stuff most of us are used to.

Bring your portable setup and lets make some contacts. If your interested contact me. Everyone is invited!

Greg Moore - KG7DMI

TheBigFord@frontier.com

SNARS CALENDAR

SNARS monthly meeting (breakfast!)

Saturday, May 7th, 8:00 AM

Boomtown Casino Hotel, I-80 exit 4, Verdi NV

SNARS Reno Ham Swap

Saturday, May 7th, 6:00 AM

See info above!

Technical Committee Meeting - SNARS

Wednesday, May 11th, 2016 6:00 PM - 7:00 PM PDT

**Washoe County Regional Emergency Operations Center,
5195 Spectrum Blvd Reno, Nevada 89512**

Board of Director's Meeting - SNARS

Wednesday, April 18th, 2016 6:00 PM - 7:00 PM

**Washoe County Regional Emergency Operations Center,
5195 Spectrum Blvd Reno, Nevada 89512**

WELCOME NEW SNARS MEMBERS!

NEW MEMBERS FOR APRIL 2016 | 319 Active Members as of Apr 30, 2016

Johnathan	Clymer	KI7DDV
John	Mougenel	KI7DDS
Joy	Mougenel	KI7DDT
Marc	Roberts	KI7DDW
John	Miller	N7JDM
Paul	Gulbro	WA6EWV
Blayne	Ence	KG7SS

YET ANOTHER HAMFEST.....

The Churchill Amateur Radio Society is hosting its first annual Hamfest fundraiser located in the Dry Gulch Building 255 Sheckler Rd, Fallon, Nevada on July 10, 2016
EVERYONE IS WELCOME!

Talk-in on 147.345 + 156.7pl & 442.225 + 123.0pl -
Repeaters will be linked in analog

The rain or shine event will include amateur radio license testing provided by the ARCC VE team! Plenty of public parking and this event is an A.D.A. accessible facility. Load in at 6 am. Event open to the public at 7 am.

NAME THAT RIG (from pg 6)

OK, maybe I threw you a curve here....unless you're in your late 80s it's really unlikely you would remember this one. The BC-1000 was a VHF backpacked radio used in World War Two. Unbelievably, it was the first radio to which the term "Walkie-Talkie" was applied. Now about that "walkie-talkie" thing.....the BC1000 was part of the SCR-300 Backpack Radio, 35 pounds plus accessories, 18 vacuum tubes, power output 0.3W over 40 to 80 Mhz. Compare that to your Icom or Baofeng.....

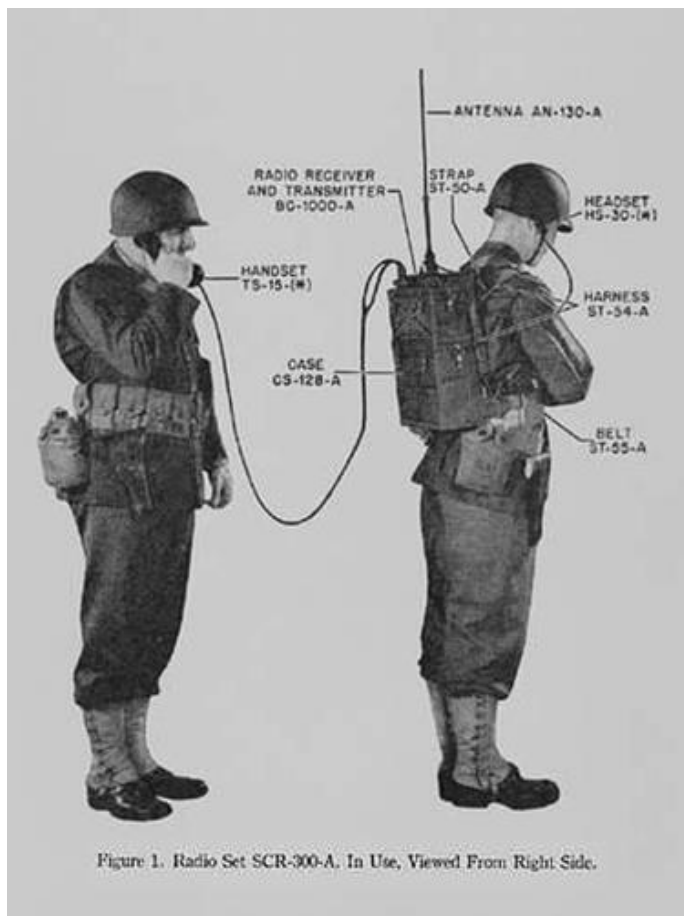


Figure 1. Radio Set SCR-300-A. In Use, Viewed From Right Side.

FUN STUFF FOR MAY

Looking for some excitement on the bands during the winter blahs? There's something for everyone on the air! May is a little quiet except for the 7QP but here are some of the more popular or interesting ones:

5/7 1300 to 5/8 0700 1.8-144Mhz 7th Call Area QSO Party CW Ph Dig www.ws7n.net/7QP (that's us gang!)

5/7 0001 to 5/8 2359 28Mhz 10-10 International SpringContest, CW www.ten-ten.org/index.php

5/8 0000 to 5/29 2359 1.8-28Mhz CQ WW WPX Contest, CW www.cqwpw.com/rules.htm

For a full list of contests, visit:

<http://www.arl.org/files/file/Contest%20Calendar/2016-05.pdf>

If you're not into contests, there's always DX to chase, lots in April! Some of the better DX coming up in April:

May01 to May05 Palau T88RF

May01 to May22 Dem Rep Congo 9Q0HQ

May01 to May27 Vanuatu YJ0CS

May08 to May15 Palestine E44QX

May13 to May19 Malta 9H3SQ

May20 to May31 Norfolk I VK9NT

Visit <http://www.ng3k.com/Misc/adxo.html> for current info and full lists!

CARCON NEWS

From the radio-pack reflector.....

If you are in need to update your repeater information or do a search to look up a repeater frequency in Nevada, I have good news, the CARCON web page is up and working. Go to www.CARCON.org [carcon.org.]

If you are using Google to search for CARCON, the information has not been updated as yet.

Jim Stichter. WA7MOC jim.s22@sbcglobal.net

LOOKING FOR A FEW GOOD WRITERS

Do you have an interesting radio-related article you'd like to see published in Cracklin Static? Proud of your shack, and have some photos of it? Built a nice piece of gear or accessory for your station? A colorful QSL card? We'd love to include your work in Cracklin Static! See an error in Cracklin Static? You can contact me (WB2AWQ) at holden7471@msn.com, or call me at 846-6820 (cell) to discuss! This is YOUR newsletter!.....73, Howie

ARES NEWS

REMINDER the next One Day Ham Cram (Ham test review) will be held Saturday May 21st at the Regional Emergency Operation Center 5195 Spectrum Blvd, Reno, 0800-1600. If you know anyone that wants to review, then test for Technician or upgrade to General or Extra they **MUST** register on SNARS website (<http://snars.org/classes/>) before you can attend. Washoe ARES Inc. will be selling at the Ham Swap, come check us out and make a donation as we are a 501(c3).

The May ARES training will be held at Boomtown on May 7th after the SNARS meeting.
Here are the latest dates for communications events for this year.

Expanded full calendar of ARES events requiring communications, including contact info

EVENT 2016	DATE	DATE END	SPONSOR/ORGANIZER	COORDINATOR	CONTACT
Silver State 50/50 race	5/20/16		SNARS	Ray W7TAP	w7tap@w7tap.com
America's Most Beautiful Bike Ride	6/5/16		Tahoe Amateur Radio Assn	Paul McCaffee	paul.mcafee@att.net
Pony Express Re-Ride	6/15/16	6/25/16	SIERA		http://www.cvham.com/contact.php
FIELD DAY	6/25/16	6/26/16	SNARS		holden7471@msn.com
Reno 5000-2	6/26/16		Dolan Auto Group	Bob Miller WA6MTY	wa6mtty@gbis.com
Death Ride	7/9/16		Tahoe Amateur Radio Assn	Paul McCaffee	paul.mcafee@att.net
Tahoe Rim Trail	7/16/16	7/17/16	WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com
Round Valley Walk/Run	8/6/16		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Running With the Bears	8/20/16		Plumas ARC	Larry Trotter KI6YUK	dltrotter@sbcglobal.net
Reno 5000-3	8/28/16		Dolan Auto Group	Bob Miller WA6MTY	wa6mtty@gbis.com
Tahoe 200	9/9/2016	9/13/16	WC-ARES	Bob Miller WA6MTY	wa6mtty@gbis.com
Tour De Tahoe	9/11/16		Tahoe Amateur Radio Assn	Paul McCaffee	paul.mcafee@att.net
Reno Air-Races	9/14/16	9/18/16	WC-ARES	Rick Russell KF7KEM	wa6mtty@gbis.com
Edible Pedal 100	9/18/16		Sunrise Rotary Club	Bob Miller WA6MTY	wa6mtty@gbis.com

Also summer thunderstorm weather is just around the corner, attached is the "Severe Weather Report" form developed by the National Weather Service and my SKYWARN team. Please use it when checking into the SKYWARN activation as this is the only data the NWS is interested. We don't hold a NET because we will request severe weather reports from many counties in Northwest Nevada and Eastern California. See you on May 7th.

Bob Miller WA6MTY
Amateur Radio Emergency Service
Emergency Coordinator
775 843-5952
www.wcares.us
www.wcares.us

US NAVAL COMMUNICATIONS IN THE COLD WAR ERA (PART TWO of THREE)



Power Station: Power for the receiver site was maintained by four vans, each with two Detroit Diesel V-8 engines powering large generators supplying 2010 KW of standard power, and 400 KW of unbreakable power. We were totally independent of local power on the entire base. The generator vans were several hundred feet away to minimize noise from the generators. Inside the receiver site you could not hear them but outside there was a constant drone and smell of diesel engines.

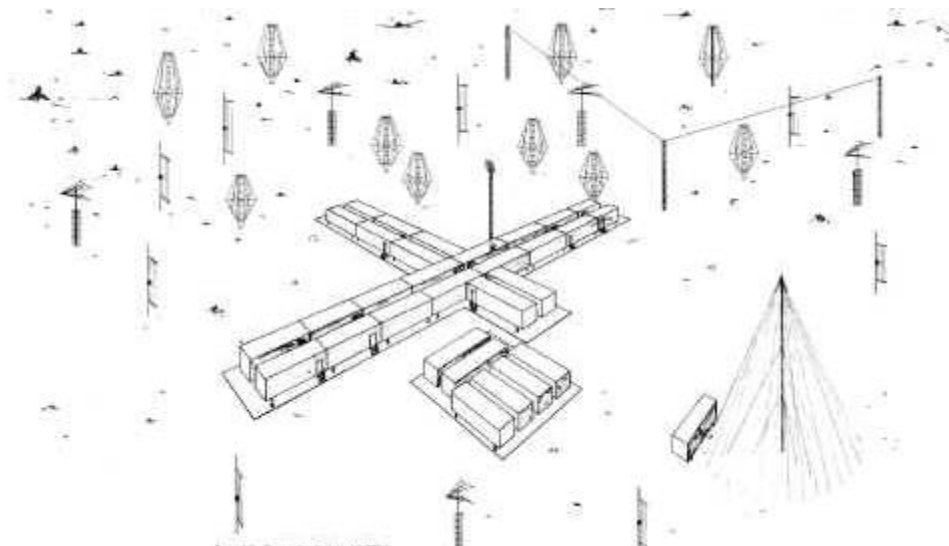
Just outside of the receiver site vans was a small building, which housed some administrative functions, and also served as a control point for the Wullenweber antenna array. The Wullenweber was a system of some 120 towers on a 720 ft circumference, in three concentric rings around the receiver site vans, with an extensive ground system. The towers could be switched in various configurations to provide very precise direction information on received signals. This system was not under control of personnel in the receiver site vans, and very little is publicly known about the Wullenweber operations, other than that it was probably used for signals intelligence work.

Below is the list of receivers as shown in the AN/TSC-35 manual. In actuality, there were many more than indicated. I would estimate the total number of receivers at 100+, most of which were R-390As and R-1051s.

- a. Nine synthesized SSB diversity receivers with provisions for installing additional units.
- b. One synthesized SSB non-diversity receiver.
- c. Thirteen diversity RATT receiver/converter bays, one equipped for low-frequency RATT operation.
- d. Three monitor-receiver bays each with 5 receivers and 1 converter.
- e. Six CW/Ship-shore send/receive circuits and one low-frequency distress circuit.
- f. Six HICOM and point-to-point voice terminals.
- g. Nine air/ground, search and rescue circuits; 6 high-frequency and 3 VHF/UHF.

The antenna farm for the receive site had a variety of antennas. The list below was what the AN/TSC-35 system called for, but the actual mix was a little different, with a higher number of conical monopoles, and various wire antennas, and fewer log-periodic arrays.

- a. Six Rotatable Log-Periodic and two fixed Log-Periodic.
- b. Three Conical Monopole.
- c. Eleven Vertical Folded Doublet.
- d. Two Dual- Nested Rhombics.
- e. Two Single Rhombic.
- f. Two Low- Frequency Long-Wire.



Transmitter site layout as depicted in the TMC AN/TSC-35 manual. (K4NYW)

The Transmitter site had 30 vans, 24 of which were interconnected, housing all the transmitters at NGR. Signals to the transmitters were sent over a microwave link from the receiver site. This microwave link also had an operator circuit, so that control operators could direct which signals would be connected to which transmitters and antennas. While the receiver site had some 40-50 operators and technicians on watch at any given time, there were just a handful at the transmitter site.

The transmitter site had six generator vans, whose sole function was powering the transmitter vans. These generators could produce 4020 KW of standard power. There were no other buildings at the transmitter site.



Generator van with two Detroit Diesel V-8/generator combos (KG5KD)

The complement of transmitters is as follows: In deviation from the list, I believe the 200 KW HF transmitter was not used; instead there was a rather high power (100KW) LF transmitter in its place, used on a 21.6 KHz submarine broadcast. The 1 KW transmitters were TMC URT-19s or FRT-70s, the 10 KW were TMC FRT-39As, and the 40 KW were TMC FRT-40As.

Ten 1-kilowatt (PEP) synthesized SSB Transmitters.

b. Thirty-seven 10-kilowatt (PEP) synthesized SSB transmitters.

c. Sixteen 40-kilowatt (PEP) synthesized SSB transmitters.

d. One 200-kilowatt (PEP) synthesized SSB transmitter.

e. Two 2-kilowatt low-frequency transmitters. (model TAB-7)

f. One 15-kilowatt low-frequency transmitter. (model FRT-19)

g. One 50-kilowatt low-frequency transmitter. (model FRT61)

h. 80-line transmitting antenna patching facility equipped with inter-patch panel trunking.

i. Remote RF monitoring and remote visual and audible alarm facilities at a transmitter control center for all transmitters.

The antenna complement at the transmitter site was as follows per the AN/TSC-35 manual, but I believe the actual complement was a little different. The 630 ft pan-polar antenna was used for the 21.6 KHz submarine broadcast:

a. Fourteen Vertical Folded Doublet.

b. Twenty-nine Conical Monopole (includes one high-power Conical Monopole).

- c. Ten Rotatable Log Periodic.
- d. Six Dual-Nested Rhombics.
- e. Two Single Rhombic.
- f. Two Low-Frequency Long-Wire.
- g. One Low-Frequency 630-foot Pan Polar.
- h. One Low-Frequency 359-foot Pan Polar.



One of the few photos of inside the vans. Transmitter site, an FRT-40B transmitter center. (KG5KD)

NGR was one busy place. In the late 1960s, being in the Mediterranean, home of the U.S. Navy's Sixth Fleet, meant we often would have dedicated RTTY terminations with the Sixth Fleet flagship, the USS Little Rock, CLG-4. The Little Rock started life as a WW2 era light cruiser, then was converted into a guided missile cruiser carrying Talos missiles, but still carried a 6 inch triple gun turret on the bow along with a 5 inch dual gun turret. The terminations usually ended up in ship-to-shore, occasionally occupying two teletype machines and keeping an operator incessantly busy taking the Little Rock's traffic and forwarding it to the message center for further processing. Each message from an RTTY setup consisted of both a hard copy and a rollup of teletype tape. Each message also had to be logged in by its date-time, time received, and an operator initial. Several hundred messages a day were not unusual for such a termination.

Along with the terminations, the itinerant Orestes circuits had to be manned, along with the CW circuits. Normally there would be one CW operator, and one Orestes operator, who would be proficient enough in CW to relieve the CW operator for meals, bathroom calls, etc. Typical CW daily traffic was on the order of 25-35 messages. Unlike most commercial traffic, which were usually very short messages, much of the CW traffic came in the form of coded group messages, often running upwards of 500 groups. Once the traffic was taken off the air, it had to be typed into a teletype tape. The CW operator and Orestes operator worked as a team, pitching in wherever needed, whether cutting tape, manning the RTTY or CW circuits, or occasionally helping out in the message center if conditions warranted.

The rate of traffic was such that one CW operator was normally enough, but certain times of the day were hot traffic times. Immediately following changeover to the new radio day (0000Z), there would be a flurry of ships sending weather reports. Then in the early/mid-morning hours it seemed many ships unloaded their days'

traffic. One occasionally reads of disparaging comments about Navy (or Coast Guard) CW operators being not so great, but I can tell you, most I encountered in that period (myself included I dare say) were top notch operators, easily capable of 25 WPM or more all watch long, with accuracy far greater than required by either Amateur standards, or even commercial standards. One minute solid out of five, or answering 10 questions correctly isn't even close, and even the 95% accuracy required of Radiomen in school was substandard for sitting a CW circuit. And the CW operators of the time were usually very much into their work, eagerly taking traffic from whomever, and wherever they could. There were certain bragging rights to how much traffic you took on a watch.

There were several items which highlighted my time at NGR, besides the terrific off-base liberty there. One of NGR's CW operators took the last message from the USS Scorpion before it sank. Submarines of that era usually sent a "check" message either daily or every three days, confirming they were on course, on program. While the message from the Scorpion, being received encoded, has never been released publicly, it is assumed it was just such a message.



USS Scorpion SSBN-589 (KG5KD)

NGR was one of the main stations through which traffic from the USS Liberty, a "spy" ship off the coast of Israel, was sent following it having been attacked by Israel. There were years of proceedings on this incident, much of it relating to traffic passing through NGR.

NGR was the prime station for terminating with US Navy ships going into the Black Sea, the first of which was in early 1969. At that time in the Cold War, the Black Sea was considered a dangerous place for US ships, thus they always maintained a 24/7 dedicated RTTY termination so that any traffic could be immediately sent and given top speed handling.

NGR participated in testing new submarine rescue buoys, small radio beacons which were to be released to the surface in the event of a sub going down, and broadcasting a short CW message repeatedly on HF. Signals were seldom heard, and to my knowledge this system was never deployed on any U.S. submarines.

NGR also communicated on CW with the Battleship USS New Jersey, on her shakedown cruise prior to deploying to Vietnam in 1968.

(To be continued next month)



Board of Directors Meeting

April 20, 2016 - 6:00 PM

Washoe County Regional Emergency Operations Center
Board Room
5195 Spectrum Blvd, Reno

DRAFT MINUTES - To Be Approved on May 17, 2016

1. Call to order Special Meeting to fill two board vacancies and roll call at 6:00 PM

Anthony Marcin, W7XM	Yes	VACANT		Vacant	
Bill Jones, AE7OX	Yes	John Byerly, N7ROJ	Yes	Steve Johnson, KS6A	Yes
Jim Shepherd, W6US	Yes				
Visitors –					
Robert Smith, KD7BAC		Amadeo Luchessi KF7BNT		John Miller, N7JDM	
Kim Farnham, KG7TMA		David Richards, AF6MN		Barry Bettman, K6ST	
Bill Nichols NN7K		Rob Dunbar, NB6C		Wes Vick, KG7QXE	
Judy Carlson, KE6GIW					

2. Nominations to Fill Two Vacant Seats

- A. Bill Jones nominated Rob Dunbar and John Byerly seconded. Barry Bettman nominated himself and Jim Shepherd seconded the nomination. John Byerly nominated Chuck Farnham and Bill Jones Seconded. Board members voted by show of hands. Board members elected were Rob Dunbar and Barry Bettman.

3. Adjournment at 6:05 PM Tony Marcin

1. Call to Order Special Board Organization Meeting 6:06 PM

- A. Nomination of Secretary. John Byerly nominated Rob Dunbar seconded by Bill Jones.
B. Nomination of Vice President. Steve Johnson nominated Jim Shepherd seconded by Bill Jones.
C. Rob Dunbar will be filling Judy Carlson's position which is up at the end of 2015 and Barry Bettman will be filling Don's position which is up at the end of 2016

2. Adjournment at 6:11 PM Tony Marcin

1. Call to Order Board Meeting 6:13 PM

2. Approval of Minutes

- A. No meeting minutes to approve from last month

3. Reports

A. President's Report -

1. We have education coming up. We will be holding Technician and General classes at Boomtown

B. Secretary Report

- a. We will be changing our corporate ordination from Chapter 81 to Chapter 82 to be a pure non-profit

C. Membership Coordinator

- a. Membership Status - Report - 325 Members as of April 20, 2016.
- b. Working to form a membership committee.

D. Treasurer

- a. Financial Report
- b. Balances: Checking: \$7,854.57 Savings: \$3,241.72 Paypal: \$926.21 TrustFund: \$10,201.81

E. Technical Committee - Report

John Byerly reported – Everything seems to be running well. Need to investigate the Ethernet link over to Davidson. Dave Metz wants to go forward the power project. Discussed Dave Metz our move to the new room on Toulon. Metz asked if we would have a problem if we installed a camera we can watch on his website. There has been discussion on moving the 610 antenna on to property SNARS owns. Washoe County donated 3 Master 3 repeaters but they need final amplifiers. The repeaters have been checked by Steve Kometz. Mount Rose has had some issues won't be able to look at until the snow melts. Grand Sierra says we can run a network cable to our equipment on their roof. Looking to redo

F. Control Operators / Trustee - Report

No report was submitted by Peter DeBay or Pat Sheehan.

G. Events

- a. Field Day - We will have the site 3 nights Thursday, Friday and Saturday. Judy discussed what type of food do we want to provide. Jim Shepherd is coordinating the hardware for field day. Looking to have a meeting on site sometime in early June to look at antenna layout.
- b. Ham Swap – Scheduled for Saturday May 7 at 6AM. There are 3 people signed up for spots. Barry will be running the Special Event Station N7V. Do we want to have the same raffle prize the FT60R?

H. Education Team

- a. Steve Johnson discussed creating a HF education with discussions over several breakfast meetings. Topics include contesting, logbook of the world, CQ World Wide, Power amps, QRP, Antennas, Lightning protection, and more

I. Noon Net

- a. Status - Steve Johnson reported there have been a few people drop out and looking to replace them. Steve also mentioned that he is looking for someone to replace him as net manager

4. New Business

- A. Creation/Discussion of HF Team – Tony asked if Steve would be willing to help set up a HF team. Barry Bettman offered to help.
- B. HF Radio Purchase – The club doesn't currently own a working HF rig. It would be great to have one that can be used at events for the general public to see how HF works. We can purchase a new Yeasu 450D for about \$700. John Byerly offered to sell us his rig for \$450 even though he has a buyer willing to pay \$550. Bill Jones moved to purchase the Yaesu 450d from John Byerly for \$450, motioned seconded by Rob Dunbar. After discussion motion passed. Tony is also going to look at some hard case options to keep the radio stored in.

- C. Purchase/Discussion of Band pass filters for HF Operations - Field Day. Band pass filters will allow operators in close proximity to work on bands that are harmonics of another. John Byerly motioned to spend \$550 for a Dunestar Band Pass filter Multiband remote switched bandpass filter and switch, motion seconded by Jim Shepherd, motion passed.
- D. Discussion on how often the club will reimbursement to Tim Barrett for hosting of CBridge in San Jose. Our portion of the reimbursement is approximately \$20/month. After discussion we will pay a motion was passed to pay every quarter.
- E. Purchase of Amplifiers for GE Master III Repeaters (Approx 600.00 each x 3). The three repeaters we received from Washoe County need final amplifiers. Barry Bettman moved that the club purchase 3 repeaters at a maximum of \$1800, seconded by Jim Shepherd, motion carried.
- F. Winnemucca DMR Project - Funded by Winnemucca Users, Hosted by SNARS. SNARS will help and foster areas to get clubs started. For discussion are we ok with helping them get their funding going for their own DMR system. John said should mentor and assist but not get any more invested in Winnemucca than we are.
- G. Committee – Nothing to report other than working to get membership committee going.
- H. Do we need to rent a storage locker for all the equipment the club has? This will be a good place to store some of the club assets and records.

4. Next Meeting

- A. May 18 2016 - Wednesday at 6:00PM - Washoe Regional Emergency Operations Center

6. Public Comments

- A. Open for Comments - No Public Comments.

7. Adjournment at 7:58 PM Rob, John